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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,471	10/08/1999	MARK E. GARDINER	28724/35321	4869

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EXAMINER

NGUYEN, SANG H

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/415,471	GARDINER ET AL.	
	Examiner	Art Unit	
	Sang H Nguyen	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>18</u> . | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

Response to First Pre-Amendment

1. It is in response to applicant's First Pre-amendment has been entered and made of record Paper No. 17, filed on 02/25/03. It is noted that the present application contains claims 28-47 and claims 1-27 have been canceled by the first Pre-Amendment.

Continued Prosecution Application

2. The request filed on 02/05/03 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/415,471 is acceptable and a CPA has been established. An action on the CPA follows.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "**a groove axis**" in claims 28, 31, 32, 36-37, 40, 42, 45-47 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 28, 36, and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 28; the phrase “the groove axes are arranged to be disposed substantially perpendicular to the edge surface” is not clear whether it is “the groove axes are arranged to be disposed substantially perpendicular to the light source” or “the groove axes are arranged to be disposed substantially perpendicular to the edge surface of the light guide”. Because the lack of antecedent basis for claim terminology “the groove axes are arranged to be disposed substantially perpendicular to the edge surface” of claim 28 is different from in the specification and drawings of present invention of page 10 in lines 1-3, Applicant mentioned that “the grooves may be arranged such that variation in amplitude is perpendicular to the light source 12”. Thus, What

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does applicant mean “the groove axes are arranged to be disposed substantially perpendicular to the edge surface”?

Claims 36 and 45 recites the limitation "the optical power tapers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 36 and 45; the phrase “the optical power tapers from a first value to a second, lesser than the first value along ... to be farther from the input edge” is not clear because the limitation “the optical power tapers from a first value to a second, lesser than the first value along ... to be farther from the input edge” performing a function is not a positive limitation and it does not constitute a limitation in any patentable. In order to be given patentable weight, a functional recitation must be expressed as a “means” for performing the specified function.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 28-31, 37-40, and 46-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Wortman et al (U.S.Patent No. 5,771,328) .

Regarding claims 28-31, 37-40, and 46-47; Wortman et al disclosed a method of and an optical film of an illuminated lightguide, comprising:

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* an optical transmissive film (10 of figure 1 and 30 of figure 3) having a first surface (12 of figure 1) and a second surface (14 of figure 1) opposing the first surface (12 of figure 1), and a first edge opposing a second edge (figures 1-2);

* a plurality of prism grooves (16 of figure 1 and 36 of figure 3) formed on the first surface (12 of figure 1 and 34 of figure 3), each of the prism grooves having a groove axis (figures 1 and 3) and each prism groove axis (36 of figure 3) being substantially parallel to each other (figures 1-3), wherein the prism groove axes are arranged to be disposed substantially perpendicular to light source (152 of figure 8) of a lightguide assembly system (150 of figure 8); and

* each of the plurality of prism grooves (36 of figure 3) being formed to include a plurality of optical structures (figures 1-3), the plurality of optical structures for providing optical power [is considered to be defined peak (42 of figure 3), the bottom edges of sides surfaces (38,38' of figure 3), a line (figure 1), and a groove (44 of figure 3) of each optical prism (36 of figure 3), see col.3 line 60 to col.4 line 9], each optical structure having a characteristic selected one of the group an amplitude, a period and an aspect ratio (figures 3-5 and col.4 lines 10-39 and col.4 line 62 to col.5 lines 22 and see examples 1 and 2) and the characteristic varying as a function of the location along the groove axis from the input edge surface (figures 3-6); and

* a lightguide assemble system (154 of figure 8) having an input surface (figure 8) and an output surface (figure 8) of a lightguide (154 of figure 8). See figures 1-8.

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 32-36 and 41- 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wortman et al (U.S. Patent No. 5,771,328) in view of Suzuki (U.S. Patent No. 6,088,074).

Regarding claims 32 and 41; figures 3-6 of Wortman et al discloses variation in the optical structures of adjacent prism grooves is one of in-phase and out-phase.

Regarding claims 33, 36, 42, and 45; Wortman et al teaches all of the features of the claimed invention except for optical power tapers having a first value of characteristic of the optical prism groove is less than a second value of characteristic of the optical structure. However, from the same field of endeavor, Suzuki shows that it is known in the art to provide optical power tapers (figure 6) having a first value of characteristic of the optical prism groove is less than a second value of characteristic of the optical structure (abstract and figures 1-12). Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a method of and an optical film of an illuminated lightguide of Wortman et al with optical power tapers having a first value of characteristic of the optical prism groove is less than a second value of characteristic of the optical structure as shown in the device of Suzuki for the purpose of transmission liquid crystal display using in lightguide and optical film.

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Regarding claims 34-35 and 43-44; Wortman et al teaches the optical structures comprises discrete optical structures formed in the prism groove and continuous structures formed along the length of the prism groove. See figures 1-2.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gardiner et al (6,356,391) discloses optical film with variable angle prisms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (703)308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

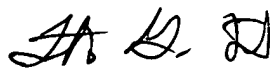
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

SN

Nguyen/ sn

March 6, 2003


Frank G. Font
Supervisory Patent Examiner
Technology Center 2800